

PATENT

DPD7305

DENTAL SCALER SYSTEM AND METHOD

BRIEF DESCRIPTION OF THE DRAWING

FIGURE 1 is a frontal perspective view of a dental scaler system in accordance with the invention with the housing in its vertical position.

FIGURE 2 is a side perspective view of a dental scaler system in accordance with the invention with the housing in its vertical position.

FIGURE 3 is a side perspective view of the housing in its vertical position as shown in FIGURE 2.

FIGURE 4 is a frontal perspective view of the housing in its horizontal position.

FIGURE 5 is a rear perspective view of the housing.

FIGURE 6 is a schematic diagram of the circuit of the dental scaler system of FIGURES 1 THROUGH 5.

DETAILED DESCRIPTION OF THE INVENTION

The invention is now described with more particular reference to FIGURES 1 through 6. With more particular reference to FIGURE 1 is seen dental scaler system 10 having dental scaler apparatus 12 and scaler handpiece 14 having coil 16. Scaler handpiece 14 has tip 15 and magnetostrictive stack 17. Dental scaler apparatus 12 has housing 18 and scaler power control circuit 20. Dental scaler system 10 is supported by horizontal support surface 13. The coil 16 is connected through an electrical

conductor 22 to scaler power control circuit 20. Control adjuster 21, which may be a variable resistor, is connected through control side 23 to scaler power control circuit 20. Knob 19 is connected to control adjuster 21.

Housing 18 has control side 23, convex side 24, holder side 25, first base side 26 having a plurality of first base feet 30, 32, 34 and 36 extending therefrom. Housing 18 has second base side 40 having a plurality of second base feet 42, 44, 46 and 48 extending therefrom. Preferably first base feet 30, 32, 34 and 36 and second base feet 42, 44, 46 and 48 are made of resilient material, such as a polymeric elastomer. Housing 18 has rear side 49. First base side 26 connected to second base side 40 at an angle greater than 30 degrees, and most preferably about 90 degrees. Second base side 40 is connected to holder side 25.

Holder side 25 has a scaler handpiece holder integrally formed therein. First base feet 30, 32, 34 and 36 are adapted to support at least a substantial portion of housing 18. Also, second base feet 42, 44, 46 and 48 are adapted to support at least a substantial portion of housing 18.

First base side 26 is integrally connected to second base side 40, and second base side 40 is integrally connected to holder side 25. Holder side 25 is integrally connected to convex side 24. Control side 23 is integrally connected to both first base side 26 and second base side 40. Also, control side 23 is integrally connected to both holder side 25 and convex side 24.

Holder side 25 has a holder 50 with grips 52, 54 and 56. Grips 52, 54 and 56 are ribs and adapted to retain scaler handpiece 14. When housing 18 is in its vertical position, its horizontal position or in motion between these positions, grips 52, 54 and 56 are adapted to retain scaler handpiece 14 in holder 50. Holder 50 is also adapted to allow the user to readily pull scaler

handpiece 14 from holder 50, and to readily push scaler handpiece 14 into holder 50.

Scaler handpiece 14 is connected to handpiece cable 62. Water conduit 60 and handpiece cable 62 extend into housing 18 through rear side 49.

In use system 10 is supported alternatively on first base feet 30, 32, 34 and 36 or on second base feet 42, 44, 46 and 48. While housing 18 is less laterally stable, when supported by first base feet 30, 32, 34 and 36, it requires less horizontal support surface area, than when it is supported by second base feet 42, 44, 46 and 48. Typical horizontal support surface areas used to support system 10 are shelf top, table top and counter top surface areas

It should be understood that while the present invention has been described in considerable detail with respect to certain specific embodiments thereof, it should not be considered limited to such embodiments but may be used in other ways without departure from the spirit of the invention and the scope of the appended claims.